

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P930922

Luminaire Tested: DFN2DS-SQ3F0-050DS830-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930922
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ3F0-050DS830-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

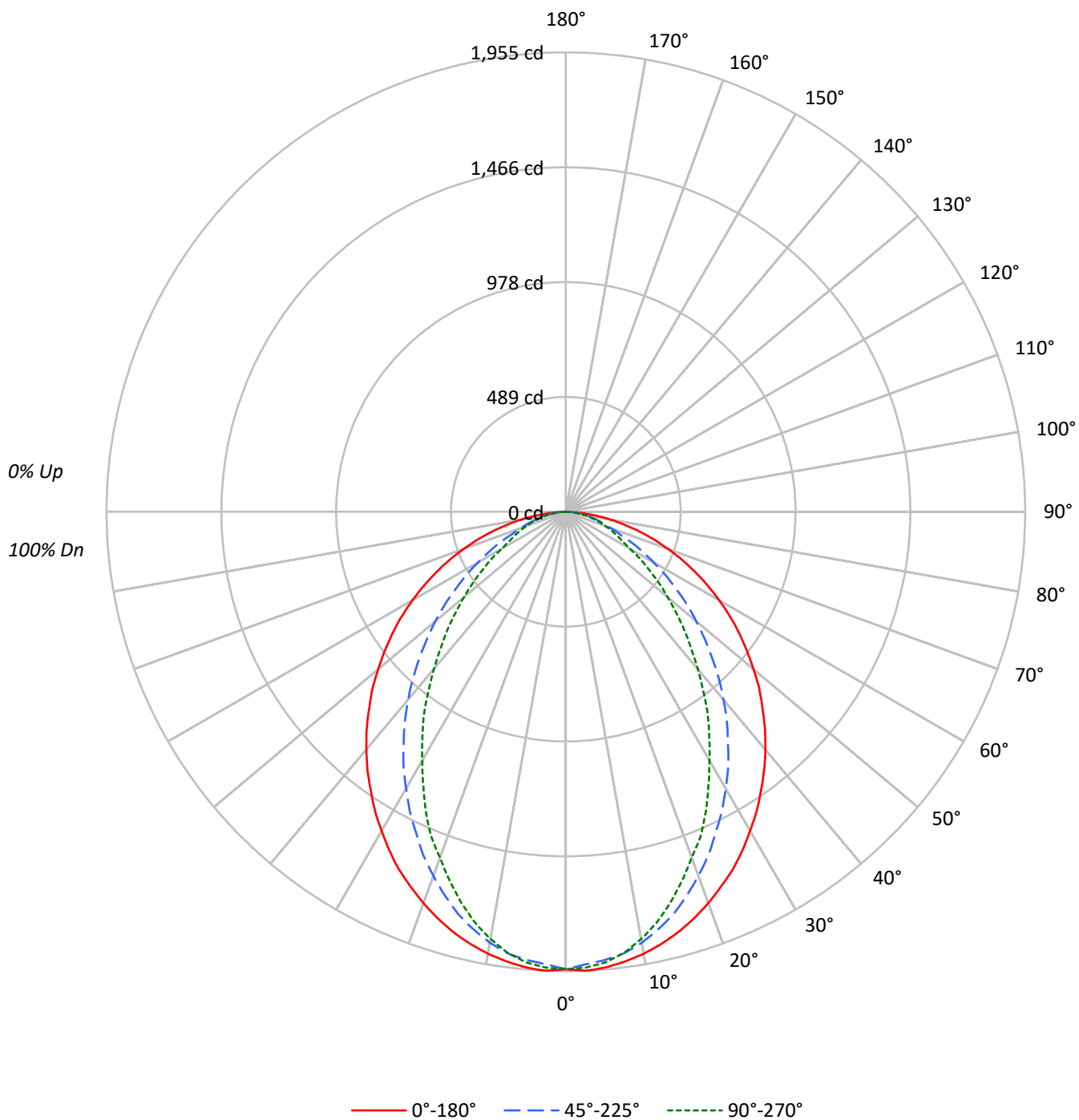
Lumens per Lamp: N/A
Luminaire Lumens: 4003.5 lumens
Efficiency: N/A
Efficacy: 83.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 48
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2230	2230	2230
5°	2239	2202	2215
10°	2222	2167	2148
15°	2196	2102	2042
20°	2161	2011	1910
25°	2125	1906	1782
30°	2075	1799	1617
35°	2026	1683	1473
40°	1976	1562	1307
45°	1918	1427	1156
50°	1859	1291	1008
55°	1798	1144	866
60°	1728	989	719
65°	1648	831	654
70°	1552	684	602
75°	1435	624	562
80°	1267	558	511
85°	995	439	439

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1918 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.4	4.6
10°-20°	500.8	12.5
20°-30°	703.2	17.6
30°-40°	766.5	19.1
40°-50°	704.5	17.6
50°-60°	553.3	13.8
60°-70°	360.1	9.0
70°-80°	185.4	4.6
80°-90°	47.3	1.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1386.4	34.6
0°-40°	2152.9	53.8
0°-60°	3410.7	85.2
0°-90°	4003.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4003.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1947	1947	1947	1947	1947	
5°	1947	1938	1915	1931	1926	185
15°	1852	1832	1772	1739	1721	522
25°	1681	1624	1508	1436	1409	773
35°	1448	1358	1203	1092	1053	906
45°	1184	1066	881	756	713	914
55°	900	763	572	467	433	804
65°	608	465	306	247	241	603
75°	324	201	141	129	127	343
85°	76	39	33	33	33	91
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1946.6	1946.6	1946.6	1946.6	1946.6
2.5°	1955.4	1946.6	1927.2	1944.9	1941.4
5°	1946.6	1937.9	1914.9	1930.7	1925.5
7.5°	1930.7	1920.3	1895.6	1902.6	1893.7
10°	1909.6	1897.3	1862.1	1856.8	1846.2
12.5°	1883.2	1867.4	1819.8	1809.3	1789.8
15°	1851.5	1832.1	1772.3	1738.8	1721.2
17.5°	1814.5	1786.3	1712.3	1673.6	1645.3
20°	1772.3	1737.0	1648.9	1605.0	1566.1
22.5°	1726.5	1685.9	1583.7	1523.9	1497.5
25°	1680.6	1624.2	1508.0	1435.8	1409.2
27.5°	1626.1	1566.1	1437.5	1354.7	1314.2
30°	1568.0	1500.9	1360.0	1270.2	1222.5
32.5°	1511.5	1430.4	1286.1	1180.3	1136.2
35°	1448.1	1358.3	1203.3	1092.2	1053.4
37.5°	1386.4	1289.5	1125.8	1004.1	960.2
40°	1321.2	1215.7	1044.6	919.6	873.8
42.5°	1254.4	1141.6	963.7	833.2	789.3
45°	1183.9	1065.8	880.9	755.7	713.4
47.5°	1116.9	991.9	801.6	676.5	637.7
50°	1043.0	917.9	724.1	602.4	565.6
52.5°	970.6	838.5	650.1	533.8	500.4
55°	900.2	762.7	572.5	466.9	433.4
57.5°	828.0	687.1	503.9	405.2	377.0
60°	754.0	613.1	431.5	341.9	313.6
62.5°	681.8	540.9	369.9	285.4	271.4
65°	607.8	465.1	306.5	246.7	241.3
67.5°	537.3	394.6	246.7	216.7	211.4
70°	463.4	325.9	204.3	186.7	179.6
72.5°	392.9	262.4	170.9	156.8	153.3
75°	324.1	200.7	140.9	128.6	126.9
77.5°	255.5	142.6	111.1	103.9	100.3
80°	192.0	102.2	84.5	77.5	77.5
82.5°	133.9	68.8	58.1	54.5	54.5
85°	75.7	38.7	33.4	33.4	33.4
87.5°	28.3	14.0	14.0	12.3	12.3
90°	0.0	0.0	0.0	0.0	0.0

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	14.02	15.54	14.39	15.86	16.17	9.98	11.50	10.35	11.82	12.13
	3H	15.79	17.15	16.17	17.48	17.84	11.25	12.61	11.63	12.94	13.30
	4H	16.45	17.73	16.85	18.08	18.46	11.75	13.03	12.15	13.38	13.76
	6H	16.94	18.13	17.35	18.49	18.88	12.13	13.31	12.54	13.68	14.07
	8H	17.11	18.23	17.53	18.62	19.03	12.25	13.38	12.68	13.77	14.17
	12H	17.21	18.29	17.64	18.67	19.10	12.33	13.41	12.77	13.80	14.22
4H	2H	14.13	15.41	14.53	15.76	16.13	10.68	11.96	11.08	12.31	12.69
	3H	16.06	17.12	16.47	17.52	17.92	12.12	13.18	12.53	13.58	13.98
	4H	16.81	17.77	17.24	18.18	18.62	12.72	13.68	13.15	14.09	14.53
	6H	17.40	18.23	17.86	18.67	19.13	13.21	14.04	13.67	14.48	14.94
	8H	17.61	18.39	18.08	18.84	19.30	13.37	14.15	13.83	14.59	15.06
	12H	17.77	18.46	18.25	18.94	19.41	13.49	14.18	13.97	14.66	15.13
8H	4H	16.83	17.61	17.30	18.05	18.52	13.07	13.85	13.54	14.30	14.76
	6H	17.47	18.11	17.97	18.60	19.08	13.66	14.30	14.16	14.79	15.27
	8H	17.72	18.30	18.23	18.81	19.30	13.88	14.46	14.39	14.97	15.46
	12H	17.92	18.43	18.43	18.93	19.49	14.06	14.57	14.57	15.06	15.63
12H	4H	16.82	17.51	17.30	17.99	18.46	13.12	13.81	13.60	14.29	14.76
	6H	17.45	18.03	17.96	18.54	19.03	13.72	14.30	14.24	14.81	15.30
	8H	17.74	18.25	18.25	18.74	19.30	14.00	14.51	14.51	15.00	15.56

END OF REPORT